

(19)



JAPANESE PATENT OFFICE

## PATENT ABSTRACTS OF JAPAN

(11) Publication number: **2000315020 A**(43) Date of publication of application: **14.11.00**

(51) Int. Cl.

**G03G 15/16**(21) Application number: **11122616**(22) Date of filing: **28.04.99**(71) Applicant: **CANON INC**

(72) Inventor: **SHIMOJO MINORU**  
**SHIMADA AKIRA**  
**ASHIBE TSUNENORI**  
**TANAKA ATSUSHI**  
**NAKAZAWA AKIHIKO**  
**KUSABA TAKASHI**

(54) **IMAGE FORMING DEVICE**

## (57) Abstract:

**PROBLEM TO BE SOLVED:** To obtain a transfer-scatter-free, satisfactory image by composing an intermediate transfer belt out of at least two layers, making the outermost layer higher in resistance value than other layers, providing a reinforcement layer on the external surface or/and internal surface of the peripheral edge of one or both ends of the intermediate transfer belt, and making the reinforcement layer equal to or higher in resistance value than the uppermost layer.

**SOLUTION:** An intermediate transfer belt 20 is composed of at least two layers, and the uppermost layer 22 of the intermediate transfer belt is higher in resistance value than other layers. Also, a reinforcement layer is provided on the external surface or/and internal surface of the peripheral edge of one or both ends of the intermediate transfer belt 20, and the resistance value of the reinforcement layer is made higher than or equal to the resistance value of the uppermost layer 22. Here, it is preferable that the resistance value of the lowermost layer 21 of the intermediate transfer belt 20 be  $1 \times 10^8 \Omega$  or below and the resistance value of the reinforcement layer be one hundred or

more times higher than the resistance value of the uppermost layer 22 of the intermediate transfer belt 20. It is desirable to subject the intermediate transfer belt 20 to sizing by a heating process in order to increase accuracy in the length of its perimeter.

COPYRIGHT: (C)2000,JPO



5/9/1

Derwent WPI

(c) 2006 The Thomson Corp. All rights reserved.

013570992 \*\*Image available\*\*

WPI Acc No: 2001-055199/200107

XRPX Acc No: N01-042704

**Electrophotographic type multicolor image forming apparatus  
has intermediate transfer belt with reinforcement layer of resistance  
more than the upper layer**

Patent Assignee: CANON KK (CANO )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No Kind Date Applicat No Kind Date Week

JP 2000315020 A 20001114 JP 99122616 A 19990428 200107 B

Priority Applications (No Type Date): JP 99122616 A 19990428

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

JP 2000315020 A 8 G03G-015/16

Abstract (Basic): JP 2000315020 A

NOVELTY - The image forming apparatus includes an intermediate transfer belt having upper layer and lower layer. The resistance of the lower layer is  $1 \times 10^8$  ohm and is less than the upper layer. The reinforcement layer having resistance 100 times or more than the upper layer, is provided on one side or both sides of the intermediate transfer belt.

USE - Electrophotographic system.

ADVANTAGE - Favorable image without jump expulsion, transfer omission is formed. No step out and crack of transfer belt. Since the belt reinforcement layer is of higher resistance compared to the upper layer.

DESCRIPTION OF DRAWING(S) - The figure shows the schematic diagram of transfer belt.

pp; 8 DwgNo 2/2

Title Terms: ELECTROPHOTOGRAPHIC; TYPE; IMAGE; FORMING; APPARATUS; INTERMEDIATE; TRANSFER; BELT; REINFORCED; LAYER; RESISTANCE; MORE; UPPER; LAYER

Derwent Class: P84; S06; T04

International Patent Class (Main): G03G-015/16

File Segment: EPI; EngPI

Manual Codes (EPI/S-X): S06-A05C; S06-A11A; T04-G04; T04-G07